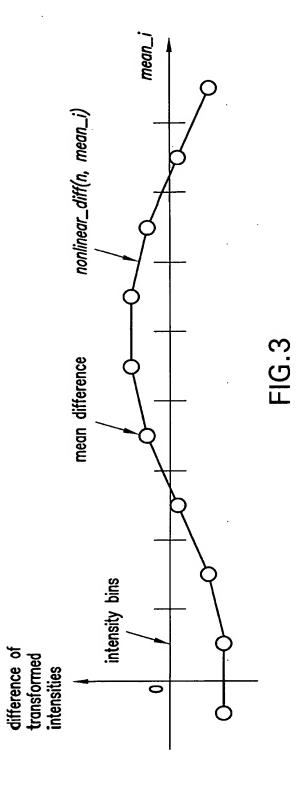
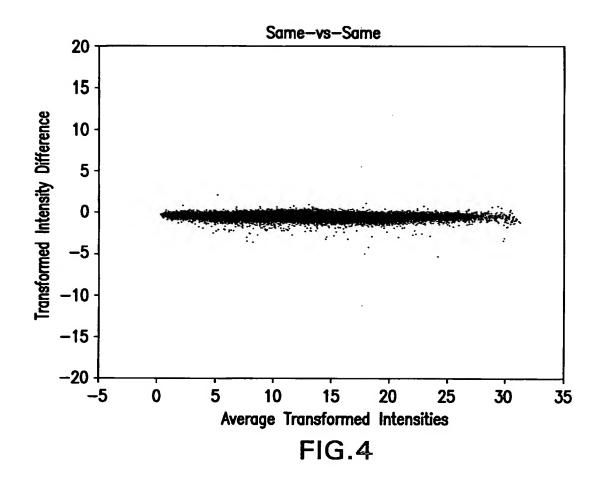
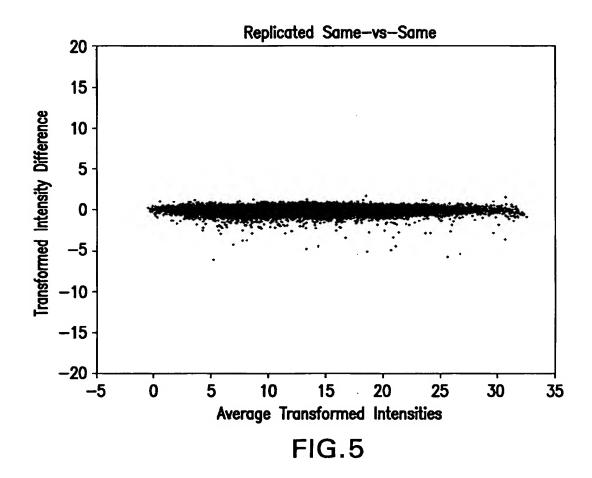


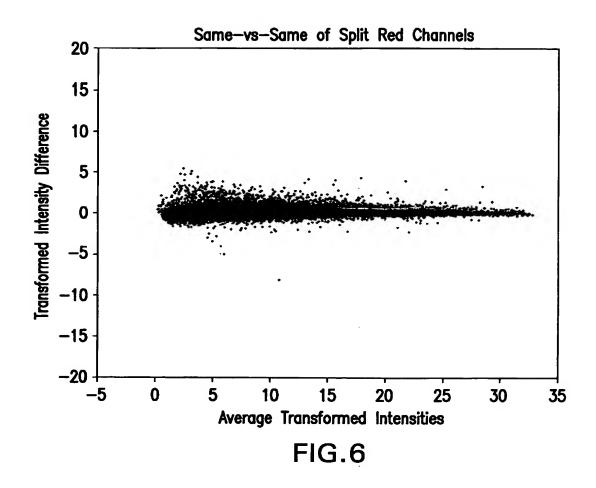
FIG.2 Output virtual intensity profiles

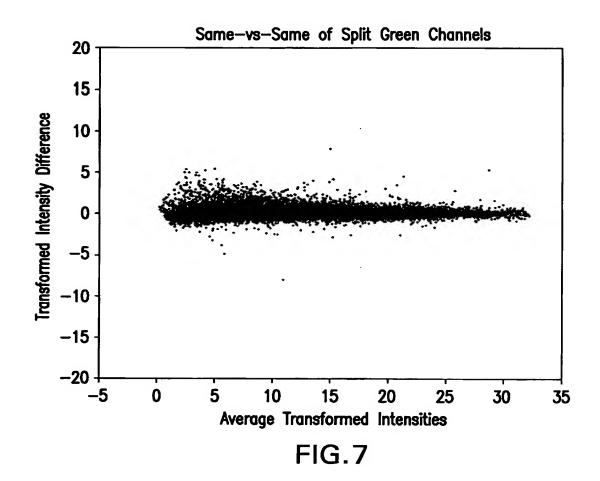
Appl. No. 10/800,340; Attorney Docket No. 9301-228
Inventor: L. Weng
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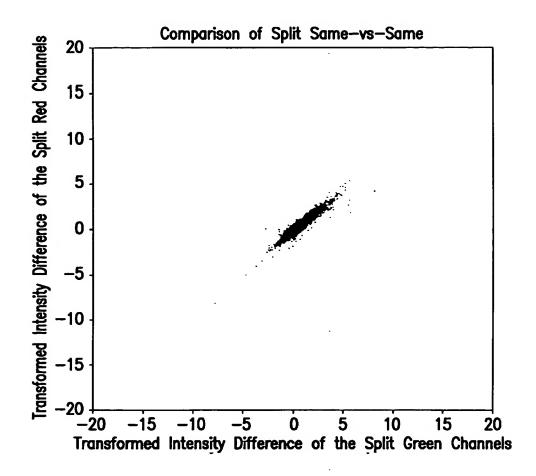
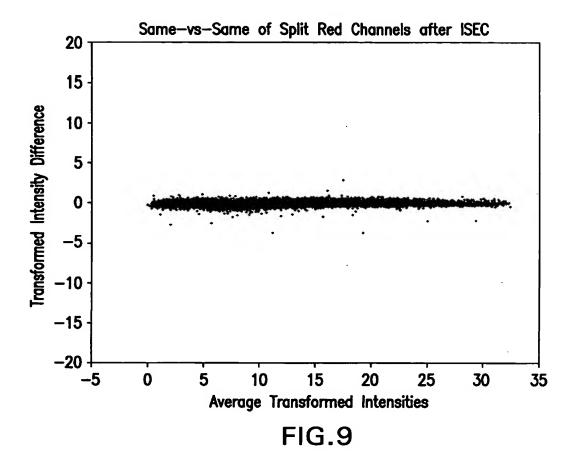


FIG.8



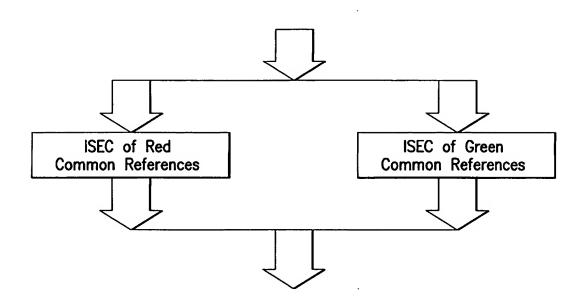
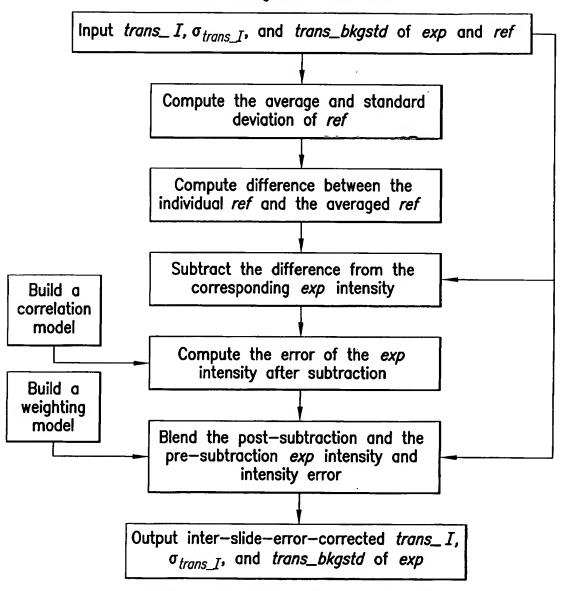


FIG.10

Input transformed intensity, intensity error, and background noise level



Output post—ISEC transformed intensity, intensity error, and background

FIG.11

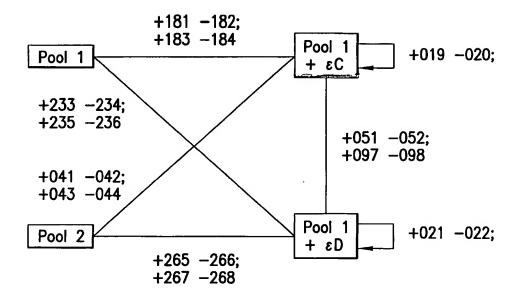
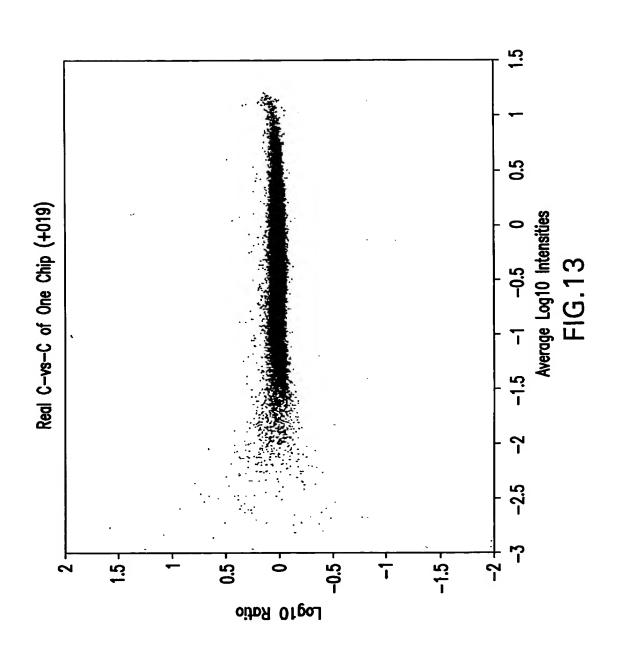


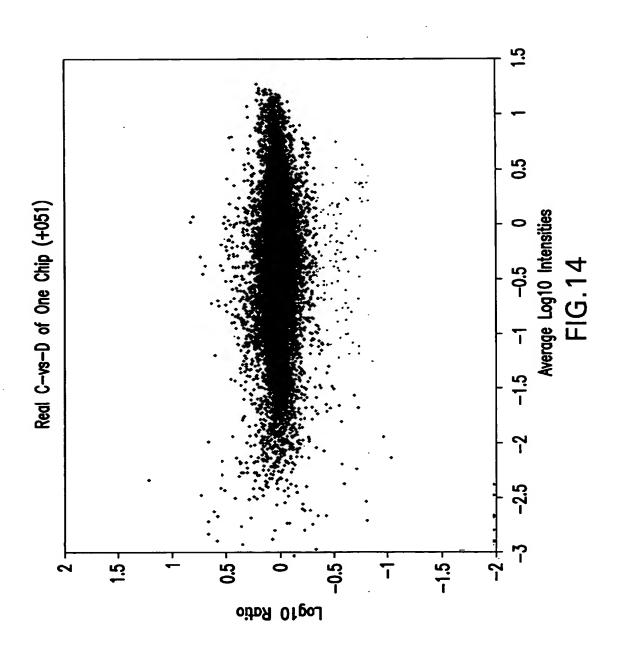
FIG.12

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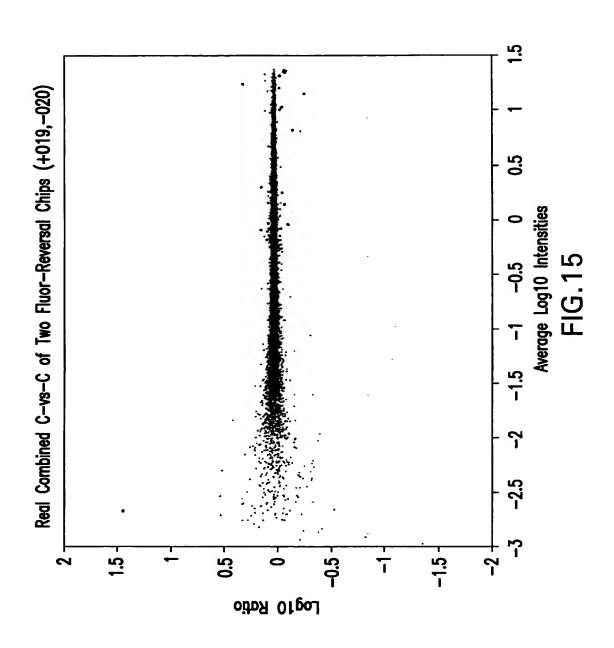


Appl. No. 10/800,340; Attorney Docket No. 9301-228 Inventor: L. Weng Response to August 30, 2007 Office Action

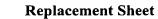


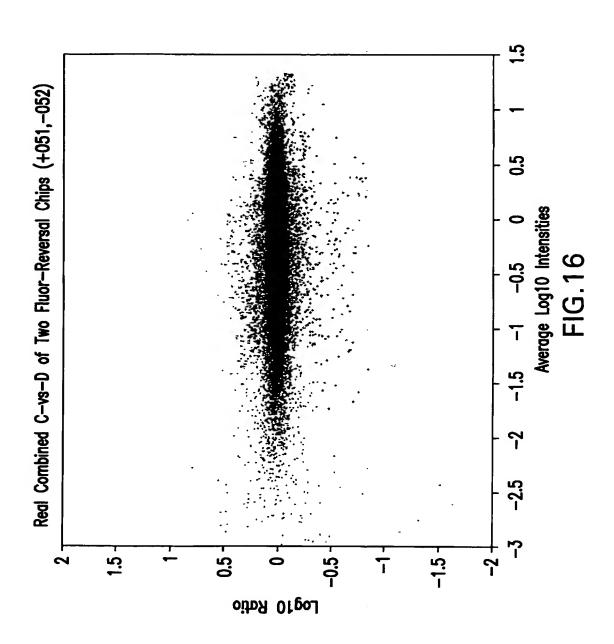


Appl. No. 10/800,340; Attorney Docket No. 9301-228
Inventor: L. Weng
Response to August 30, 2007 Office Action

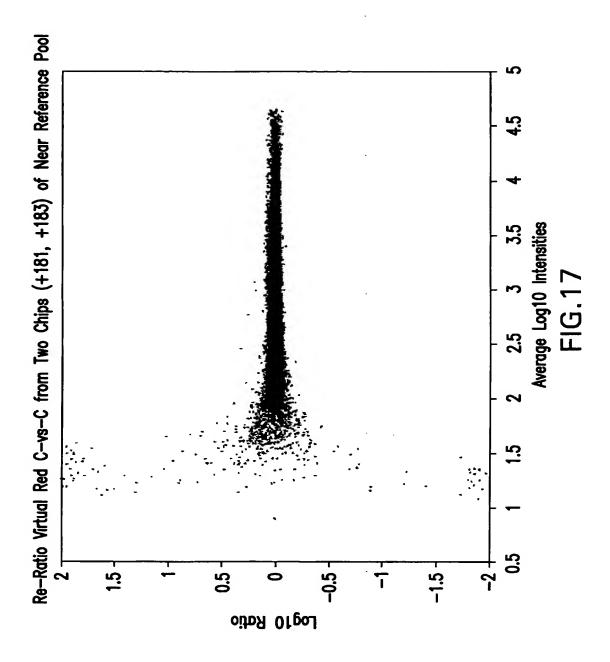


Appl. No. 10/800,340; Attorney Docket No. 9301-228 Inventor: L. Weng Response to August 30, 2007 Office Action

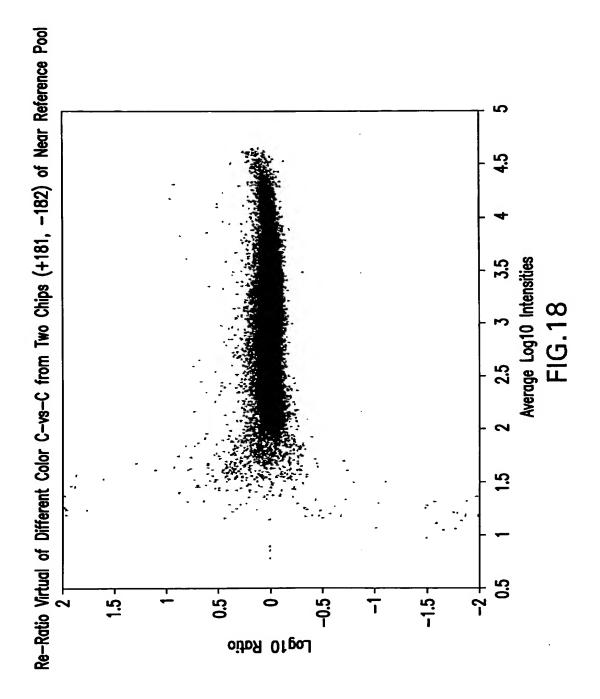




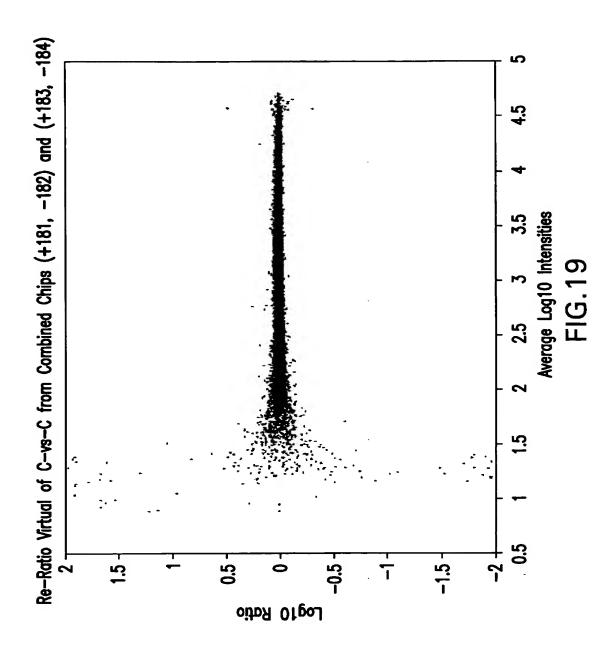
Appl. No. 10/800,340; Attorney Docket No. 9301-228
Inventor: L. Weng
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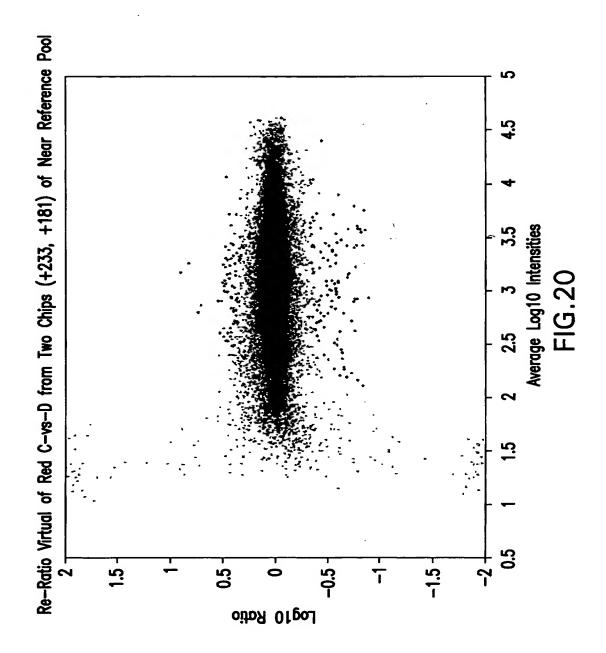
Appl. No. 10/800,340; Attorney Docket No. 9301-228
Inventor: L. Weng
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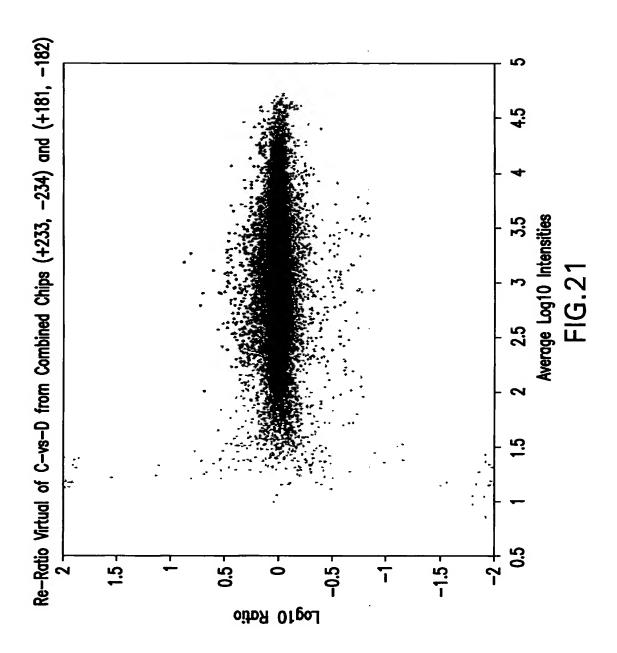


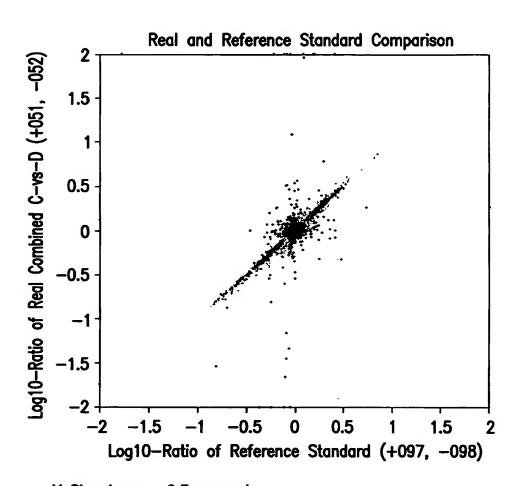
Appl. No. 10/800,340; Attorney Docket No. 9301-228 Inventor: L. Weng Response to August 30, 2007 Office Action



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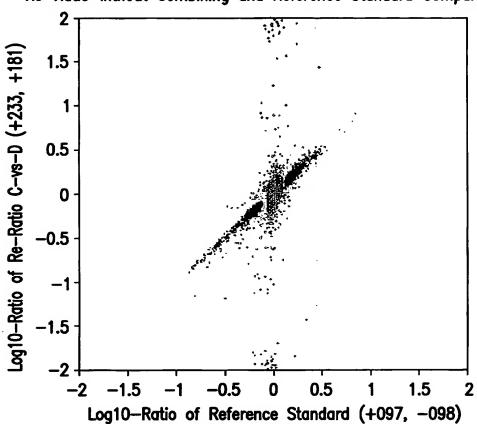




Y Signature = 6.3 percent X Signature = 6.02 percent Y Only = 0.738 percent X Only = 0.458 percent Signature in Both = 5.56 percent Signature Union Correlation = 0.997

FIG.22

Re-Ratio without Combining and Reference Standard Comparison



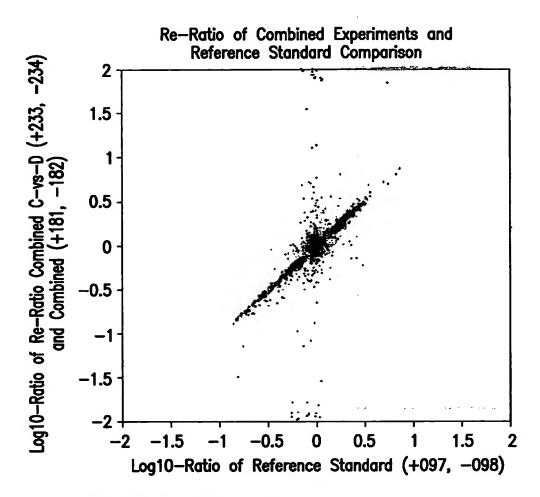
Y Signature = 0.757 percent X Signature = 6.02 percent

 $Y ext{ Only } = 0.0233 ext{ percent}$

 $X ext{ Only } = 5.29 ext{ percent}$

Signature in Both = 0.734 percent Signature Union Correlation = 0.98

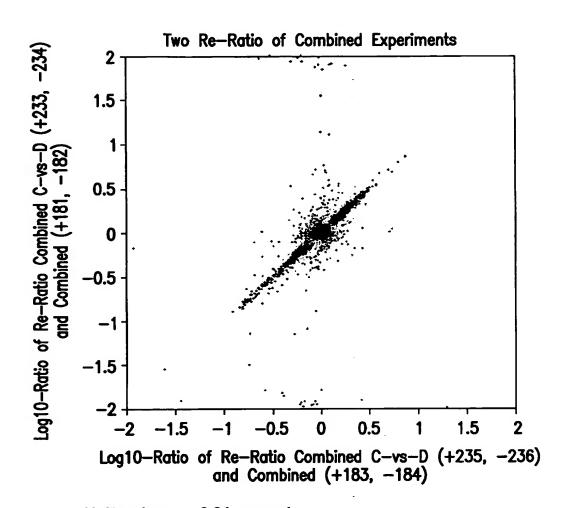
FIG.23



Y Signature = 6.04 percent X Signature = 6.02 percent Y Only = 0.78 percent X Only = 0.765 percent Signature in Both = 5.26 percent Signature Union Correlation = 0.994

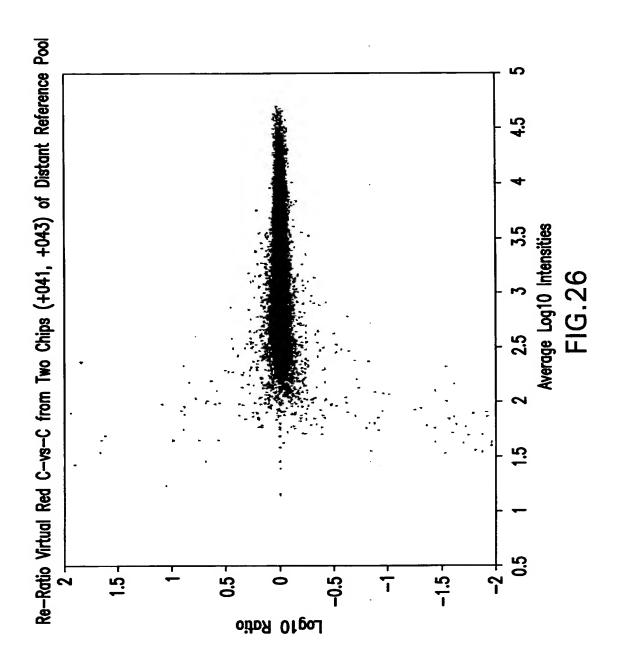
FIG.24

Replacement Sheet

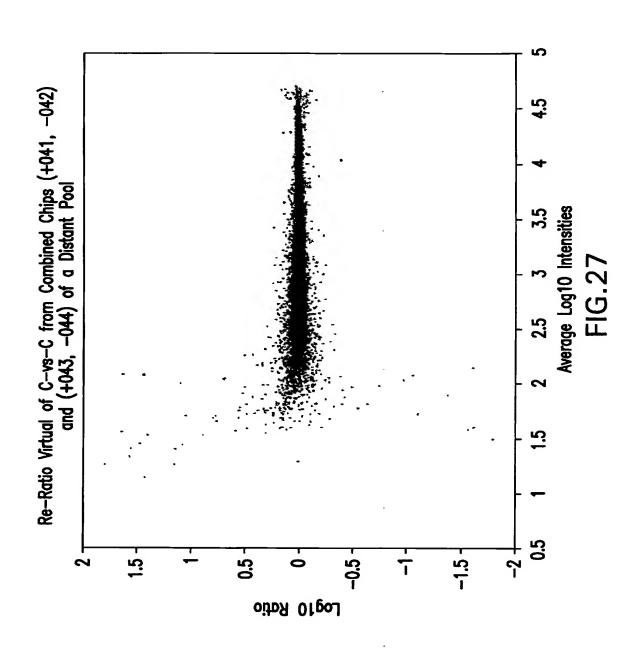


Y Signature = 6.04 percent X Signature = 6.18 percent Y Only = 0.757 percent X Only = 0.901 percent Signature in Both = 5.28 percent Signature Union Correlation = 0.995

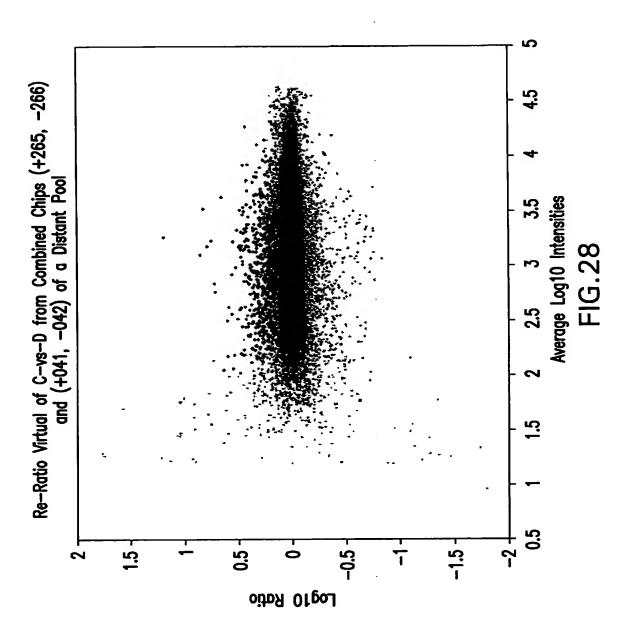
FIG.25

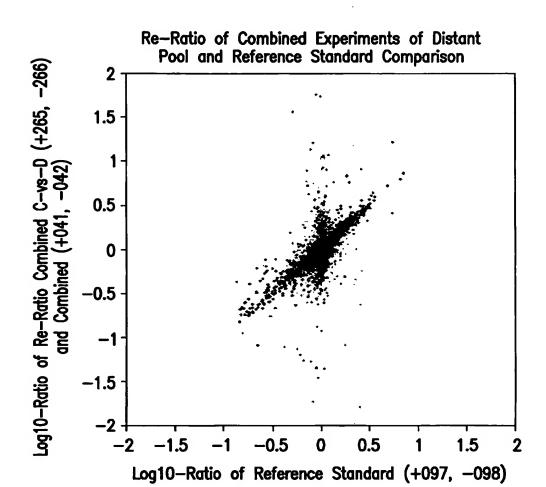


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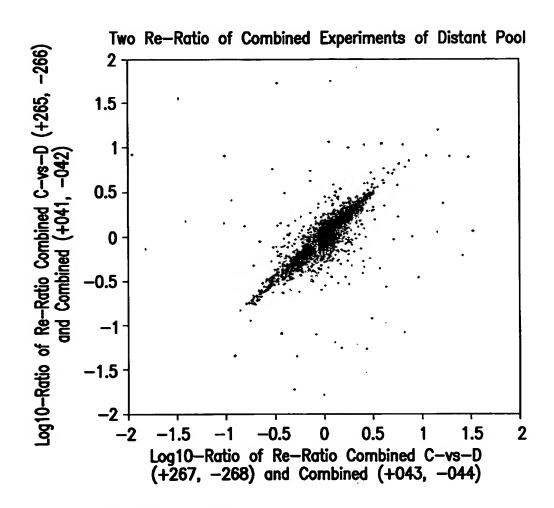




```
Y Signature = 6.23 percent
X Signature = 6.02 percent
Y Only = 1.78 percent
X Only = 1.57 percent
Signature in Both = 4.45 percent
Signature Union Correlation = 0.892
```

FIG.29

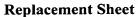
Replacement Sheet

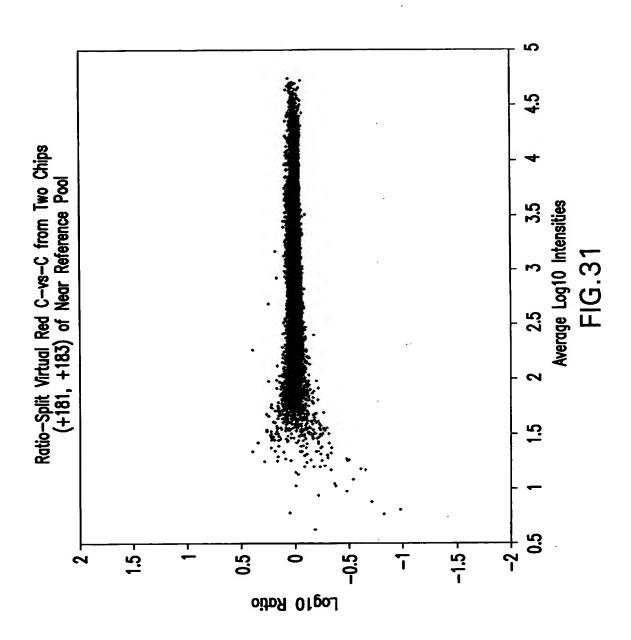


Y Signature = 6.23 percent
X Signature = 5.43 percent
Y Only = 1.53 percent
X Only = 0.73 percent
Signature in Both = 4.7 percent
Signature Union Correlation = 0.962

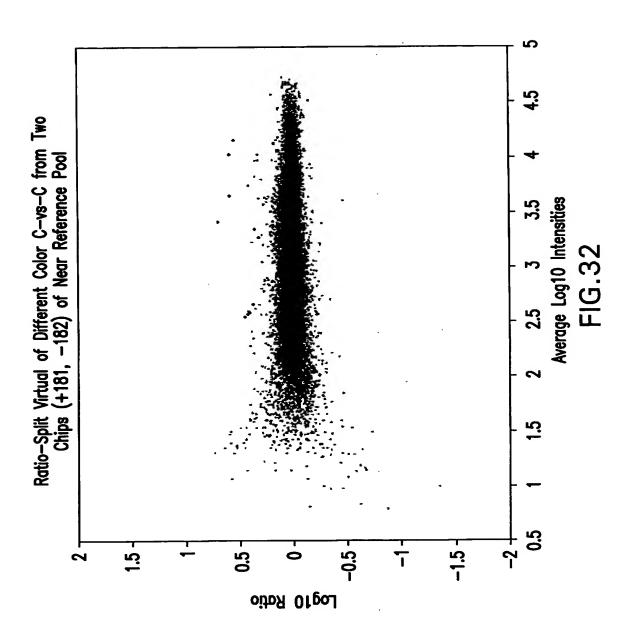
FIG.30

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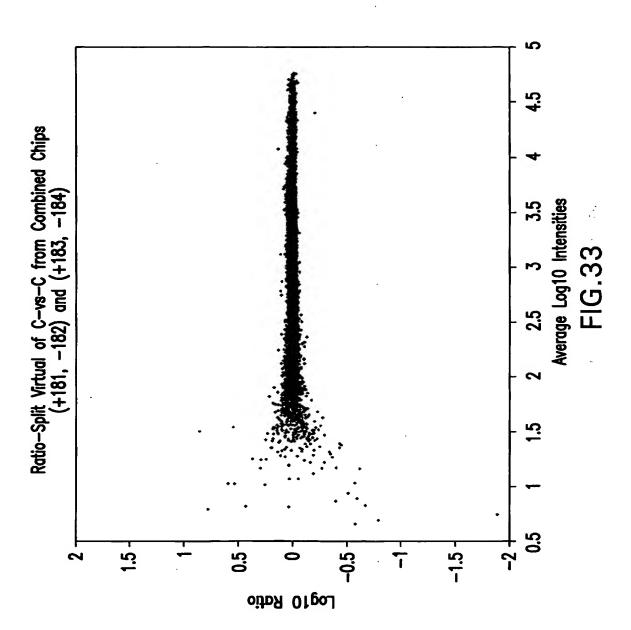




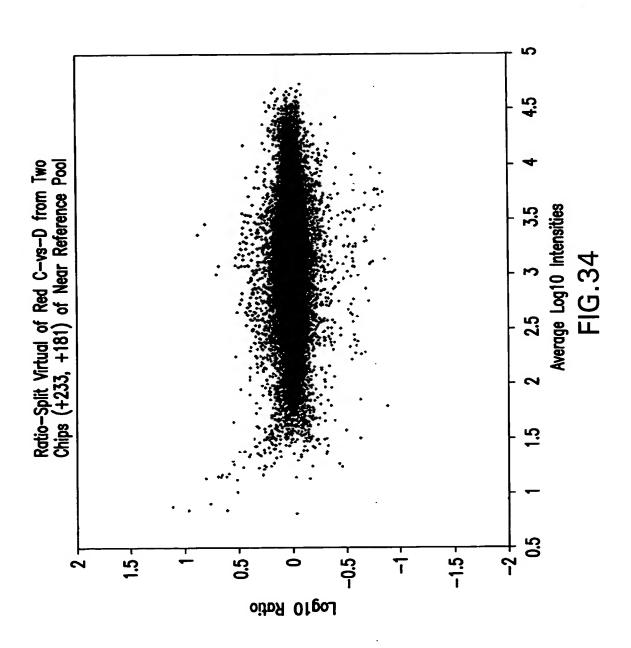
Appl. No. 10/800,340; Attorney Docket No. 9301-228
Inventor: L. Weng
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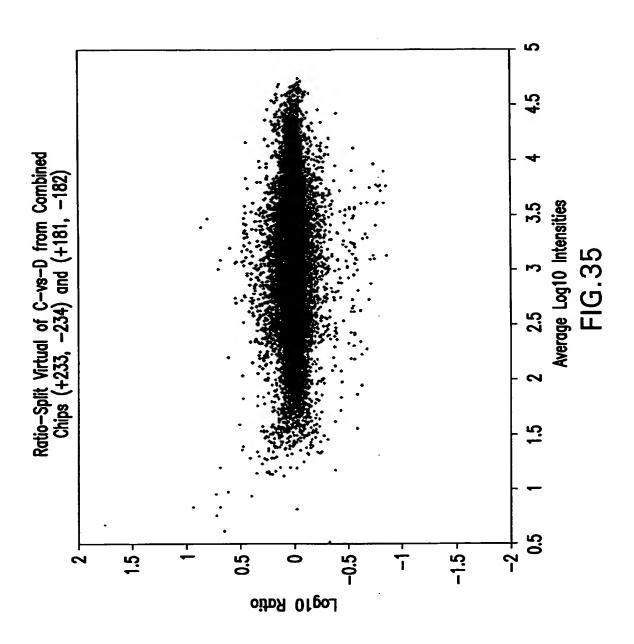
Appl. No. 10/800,340; Attorney Docket No. 9301-228 Inventor: L. Weng Response to August 30, 2007 Office Action Replacement Sheet



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Inventor: L. Weng
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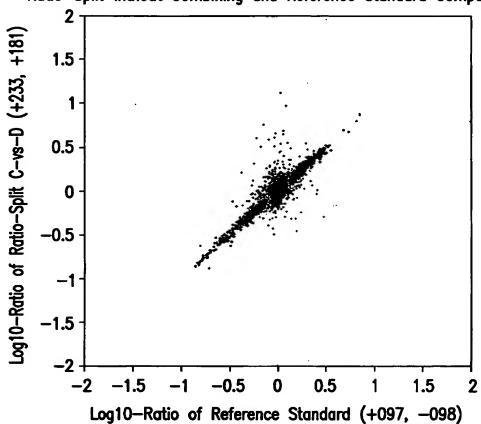


Appl. No. 10/800,340; Attorney Docket No. 9301-228 Inventor: L. Weng Response to August 30, 2007 Office Action



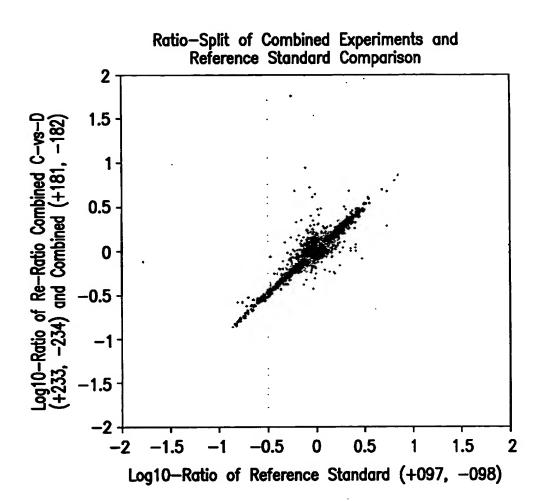
Replacement Sheet

Ratio-Split without Combining and Reference Standard Comparison



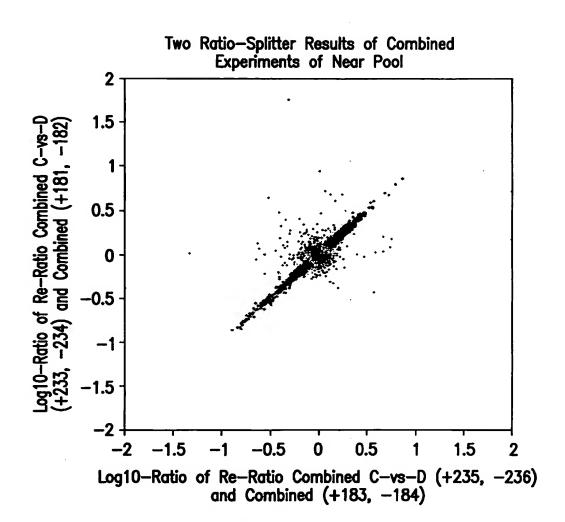
Y Signature = 0.916 percent
X Signature = 6.02 percent
Y Only = 0.0311 percent
X Only = 5.14 percent
Signature in Both = 0.885 percent
Signature Union Correlation = 0.959

FIG.36



Y Signature = 7.15 percent X Signature = 6.02 percent Y Only = 1.77 percent X Only = 0.641 percent Signature in Both = 5.38 percent Signature Union Correlation = 0.995

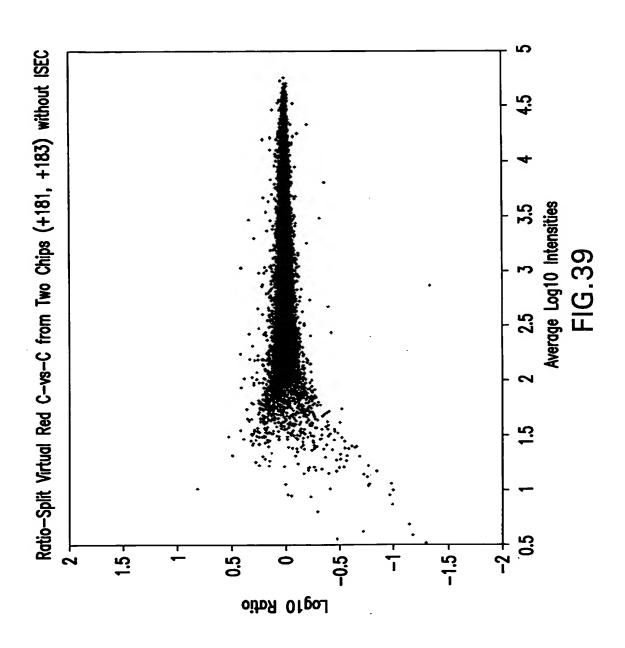
FIG.37

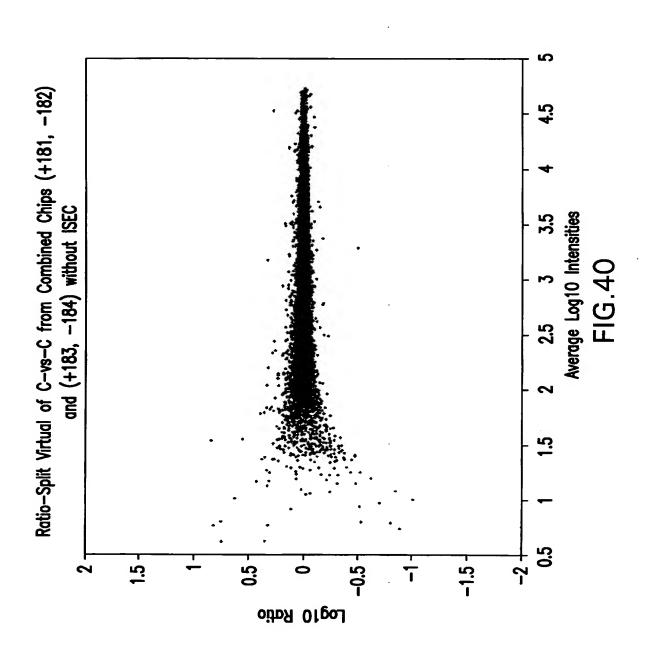


Y Signature = 7.15 percent
X Signature = 7.27 percent
Y Only = 1.02 percent
X Only = 1.15 percent
Signature in Both = 6.13 percent
Signature Union Correlation = 0.994

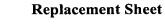
FIG.38

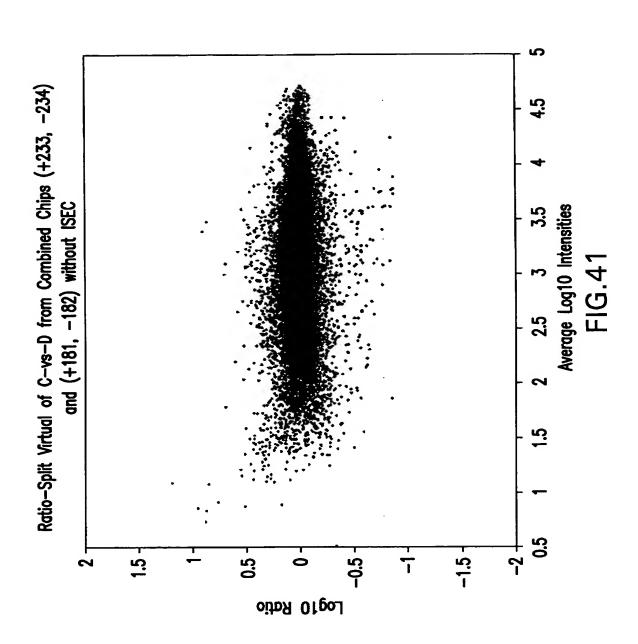
Appl. No. 10/800,340; Attorney Docket No. 9301-228 Inventor: L. Weng Response to August 30, 2007 Office Action



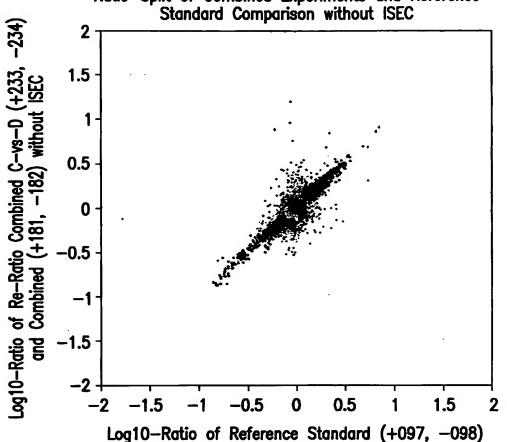


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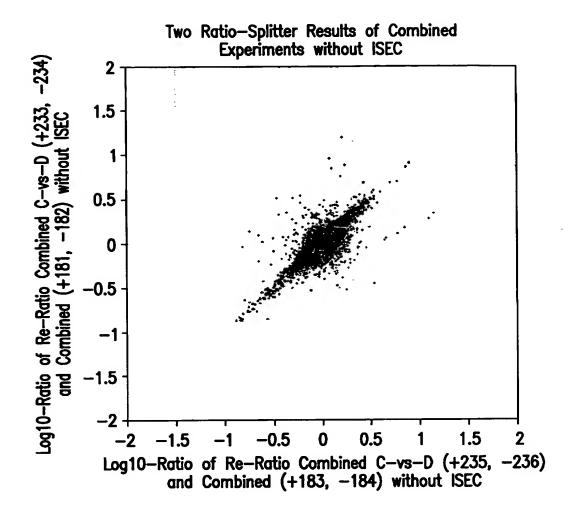


Ratio-Split of Combined Experiments and Reference Standard Comparison without ISEC



Y Signature = 6.49 percent X Signature = 6.02 percent Y Only = 1.97 percent X Only = 1.5 percent Signature in Both = 4.52 percent Signature Union Correlation = 0.968

FIG.42



```
Y Signature = 6.49 percent
X Signature = 6.76 percent
Y Only = 1.9 percent
X Only = 2.17 percent
Signature in Both = 4.6 percent
Signature Union Correlation = 0.955
```

FIG.43

Replacement Sheet

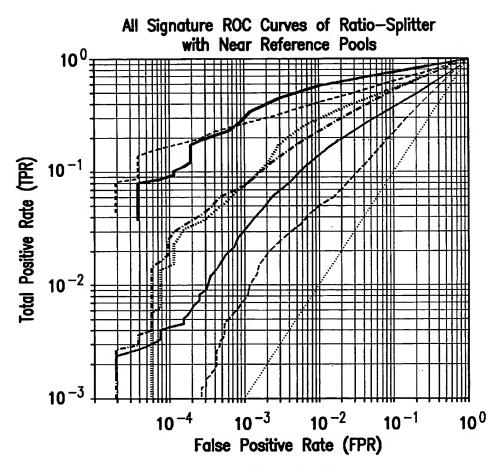


FIG.44A

Appl. No. 10/800,340; Attorney Docket No. 9301-228 Inventor: L. Weng Response to August 30, 2007 Office Action

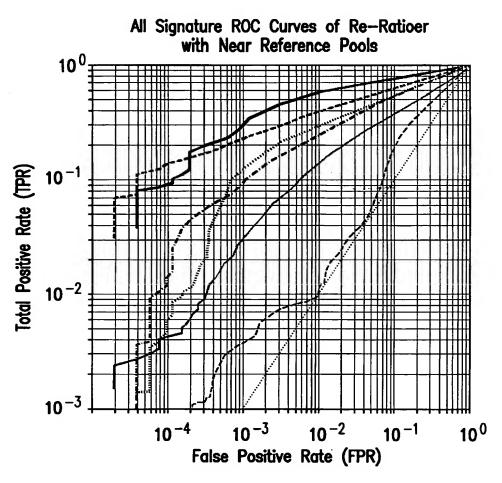


FIG.44B

Appl. No. 10/800,340; Attorney Docket No. 9301-228 Inventor: L. Weng Response to August 30, 2007 Office Action

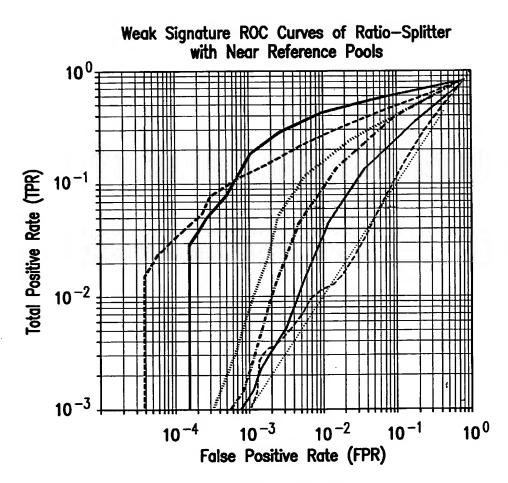


FIG.45A

Replacement Sheet

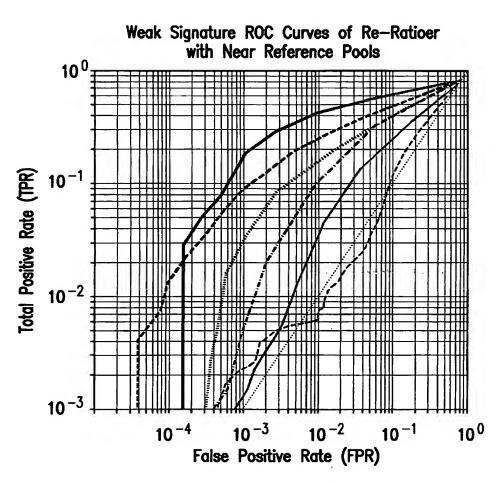


FIG.45B

Appl. No. 10/800,340; Attorney Docket No. 9301-228 Inventor: L. Weng Response to August 30, 2007 Office Action

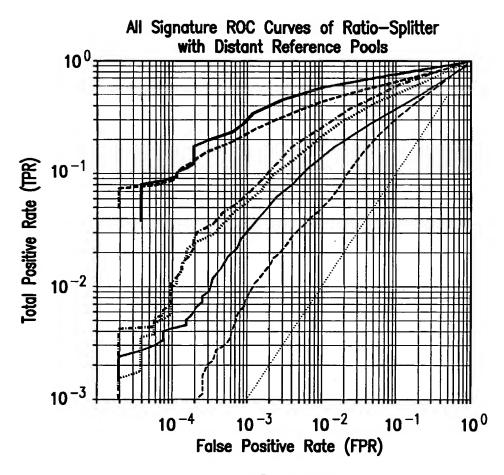


FIG.46A

Appl. No. 10/800,340; Attorney Docket No. 9301-228
Inventor: L. Weng
Response to August 30, 2007 Office Action
Replacement Sheet

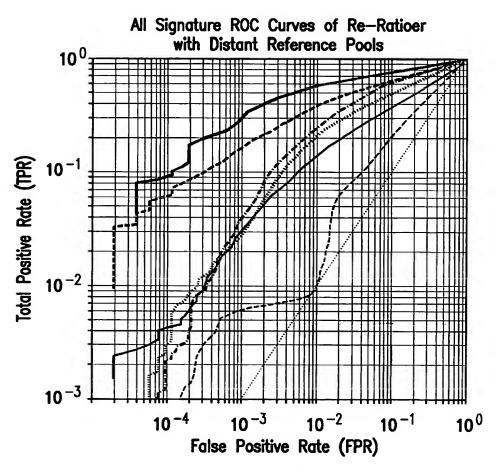


FIG.46B

Appl. No. 10/800,340; Attorney Docket No. 9301-228 Inventor: L. Weng Response to August 30, 2007 Office Action

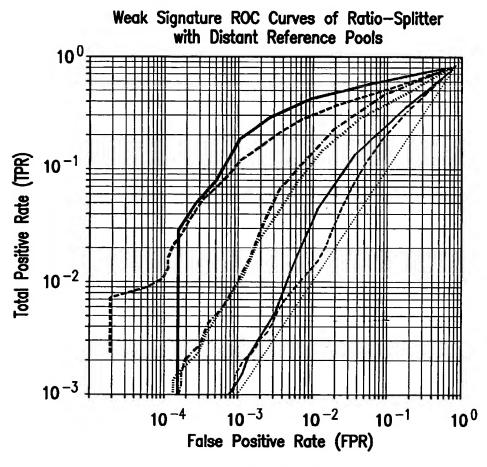


FIG.47A

Appl. No. 10/800,340; Attorney Docket No. 9301-228
Inventor: L. Weng
Response to August 30, 2007 Office Action

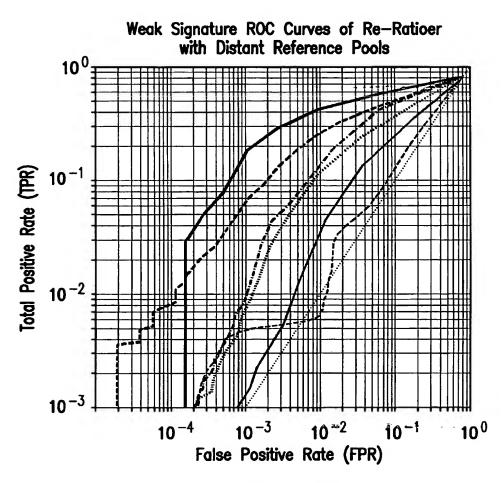


FIG.47B

Replacement Sheet

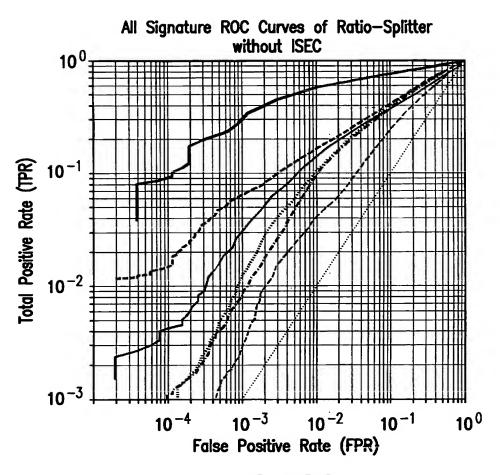


FIG.48A

Replacement Sheet

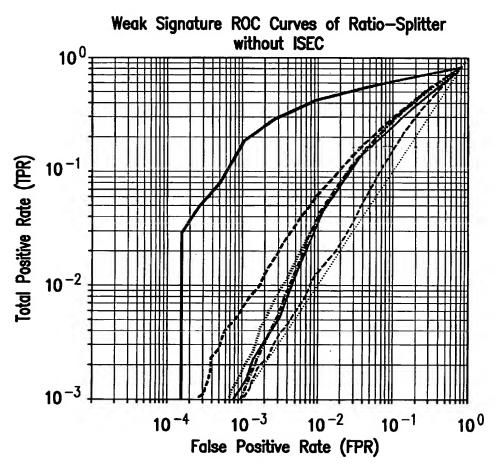


FIG.48B

